

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-26. (canceled)

27. (new) A method for the screening of angiogenic substances vis-à-vis endothelial cells with a non-angiogenic phenotype, not substantially affecting endothelial cells with an angiogenic phenotype, or

of anti-angiogenic substances vis-à-vis endothelial cells with an angiogenic phenotype, not substantially affecting endothelial cells with a non-angiogenic phenotype, comprising screening said substances with a binary assembly comprising endothelial cells with a non-angiogenic phenotype and endothelial cells with an angiogenic phenotype.

28. (new) A method for the screening of anti-angiogenic substances vis-à-vis endothelial cells with an angiogenic phenotype, not substantially affecting endothelial cells with a non-angiogenic phenotype, comprising screening said substances with a binary assembly comprising endothelial cells with a non-angiogenic phenotype and endothelial cells with an angiogenic phenotype.

29. (new) A process for screening a substance capable of inhibiting the angiogenesis of endothelial cells with an angiogenic phenotype without substantially affecting endothelial cells with a non-angiogenic phenotype, comprising the steps of:

preparing a culture of endothelial cells with an angiogenic phenotype;

preparing a culture of endothelial cells with a non-angiogenic phenotype;

adding to each of said cultures a mitogenic factor selected from the group consisting of FGF, PDGF, VEGF and EGF, and said substance capable of inhibiting angiogenesis;

maintaining each of said cultures with said added mitogenic factor and said substance for a time sufficient for at least one cell division cycle to occur;

comparing the inhibition of mitogenic action of said mitogenic factor by said substance on said endothelial cells with an angiogenic phenotype to said endothelial cells with a non-angiogenic phenotype.

30. (new) A binary assembly comprising:

endothelial cells with a non-angiogenic phenotype comprising at least one of the following properties:

said cells remain confluent in the presence of growth factor VEGF without forming tubules,

said cells do not proliferate under the action of VEGF,  
and

said cells are not protected from apoptosis by VEGF;  
and endothelial cells with an angiogenic phenotype  
comprising at least one of the following properties:

said cells form tubes in the presence of growth factor  
VEGF in a collagen gel,

said cells proliferate under the action of VEGF, and  
said cells are protected from apoptosis by VEGF.

31. (new) Endothelial cells with a non-angiogenic  
phenotype comprising at least one of the following properties:

said cells remain confluent in the presence of growth  
factor VEGF without forming tubules,

said cells do not proliferate under the action of VEGF,  
and

said cells are not protected from apoptosis by VEGF,  
or

an angiogenic phenotype comprising at least one of the  
following type of properties:

said cells form tubes in the presence of growth factor  
VEGF in a collagen gel,

said cells proliferate under the action of VEGF, and  
said cells are protected from apoptosis by VEGF.

32. (new) The endothelial cells according to claim 31,  
characterized in that these are endothelial cells of the aorta, adrenal cortex, skin, cerebrum, retina, veins or umbilical cord artery.

33. (new) A process for preparing endothelial cells according to claim 31, comprising the steps of:

incubating endothelial cells in a medium containing oestradiol and a growth factor to obtain clones of endothelial cells;

removing a clone using a micropipette, from said clones of endothelial cells;

preparing a culture of said clone;

maintaining said culture of said clone until cell confluence is obtained;

identifying endothelial cells from said culture of said clone using proliferation, migration or *in vitro* angiogenesis tests.

34. (new) A polyclonal or monoclonal antibody directed against endothelial cells according to claim 31.

35. (new) A process for preparing a monoclonal antibody according to claim 34 that is capable of activating angiogenesis comprising the steps of:

immunizing an animal by injection of cells with an angiogenic phenotype;

fusing myelomas of an animal and splenocytes of an animal in order to obtain hybridomas;

preparing a culture of said hybridomas;

cloning of said hybridomas and secreting antibodies against cells with an angiogenic phenotype; and

verifying angiogenesis-activation properties of said antibodies vis-à-vis angiogenic cells.

36. (new) A process for preparing a monoclonal antibody according to claim 34 that is capable of inhibiting angiogenesis comprising the steps of:

immunizing an animal by injection of cells with an angiogenic phenotype;

fusing myelomas of an animal and splenocytes of an animal in order to obtain hybridomas;

preparing a culture of said hybridomas;

cloning of said hybridomas and secreting antibodies against cells with an angiogenic phenotype; and

verifying angiogenesis-inhibiting properties of said antibodies vis-à-vis angiogenic cells.

37. (new) Anti-idiotypic antibodies directed against antibodies according to claim 34.

38. (new) A Fab fragment of the monoclonal or polyclonal antibodies according to claim 34, or an anti-idiotypic antibody raised against said antibodies, said fragments being capable of activating or inhibiting angiogenesis.

39. (new) A complex between:

an antibody according to claim 34 or a Fab fragment of said antibody, angiogenesis activator, and

a radioactive element containing an ionizing particle.

40. (new) A complex between an antibody according to claim 36, an angiogenesis activator, and a cytolytic compound.

41. (new) Process for preparing the anti-idiotypic antibodies directed against monoclonal antibodies that are directed against endothelial cells with an angiogenic phenotype, said process comprising the following steps:

immunizing an animal by injection of monoclonal antibodies according to claim 34,

fusing between myelomas of an animal and splenocytes of an animal, in order to obtain hybridomas;

preparing a culture of said hybridomas;

cloning of said hybridomas and secreting antibodies directed against said monoclonal antibodies, said monoclonal antibodies being directed against cells with an angiogenic phenotype, and

verifying the inhibition properties of said antibodies vis-à-vis the function of activation or inhibition of the angiogenesis of the antibodies according to claim 36.

42. (new) Anti-anti-idiotypic antibodies directed against endothelial cells with an angiogenic phenotype according to claim 32, characterized in that said anti-anti-idiotypic antibodies are capable of activating or inhibiting angiogenesis.

43. (new) A process for preparing the anti-anti-idiotypic antibodies of claim 34, directed against endothelial cells with an angiogenic phenotype, said process comprising the following steps:

immunizing an animal by injection of anti-idiotypic antibodies;

fusing between myelomas of an animal and splenocytes of an animal in order to obtain hybridomas;

preparing a culture of the hybridomas thus obtained;

cloning of said hybridomas and secreting anti-anti-idiotypic antibodies directed against cells with an angiogenic phenotype; and

verifying the properties of inhibition or activation of said anti-anti-idiotypic antibodies.

44. (new) A pharmaceutical composition, characterized in that it contains, as active ingredient, an angiogenesis inhibitor, chosen from an antibody according to claim 34, an anti-idiotypic antibody raised against said antibody, a Fab fragment of said antibody or a complex comprising said antibody or said Fab fragment, in combination with a pharmaceutically acceptable vector, said pharmaceutical composition being capable of being administered at a rate of approximately 0.01 to approximately 20 mg/kg/injection.

45. (new) A vaccine composition comprising as active ingredient a monoclonal antibody according to claim 34, an anti-idiotypic antibody raised against said antibody, Fab fragments of said antibody, or an anti-anti-idiotypic antibody in combination with a pharmaceutically acceptable adjuvant.

46. (new) A method for the treatment of pathologies requiring inhibition of endothelial proliferation, comprising administering an effective amount of angiogenesis inhibitor to a



subject in need thereof, wherein said angiogenesis inhibitor is selected from the group consisting of an antibody according to claim 34, an anti-idiotypic antibody raised against said antibody, a Fab fragment of said antibody, or an anti-anti-idiotypic antibody.

47. (new) A method for the treatment of pathologies requiring the inhibition of endothelial activation, comprising administering an effective amount of angiogenesis inhibitor to a subject in need thereof, wherein said angiogenesis inhibitor is selected from the group consisting of an antibody according to claim 34, an anti-idiotypic antibody raised against said antibody, a Fab fragment of said antibody, or an anti-anti-idiotypic antibody.

48. (new) A method for preparing a medicament intended to promote cicatrization, comprising administering an effective amount of angiogenesis inhibitor to a subject in need thereof, wherein said angiogenesis inhibitor is selected from the group consisting of an antibody according to claim 34, an anti-idiotypic antibody raised against said antibody, a Fab fragment of said antibody, or an anti-anti-idiotypic antibody.